AF/2819 #



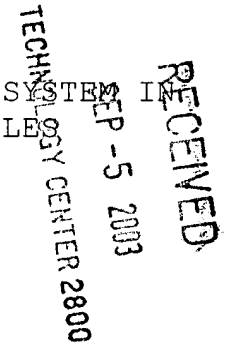
MS APPEAL BRIEF - PATENTS
PATENT
2565-0171P

#17/E.O.T
Appeal
9-25-03

IN THE U.S. PATENT AND TRADEMARK OFFICE

In re application of		Before the Board of Appeals	
Takashi SAKAKURA		Appeal No.:	01
Appl. No.:	09/284,736	Group:	2819
Filed:	April 19, 1999	Examiner:	Stephan WILLETT
Conf.:	2727		

For: A METHOD AND SYSTEM FOR UPDATING A DATA SYSTEM IN CONJUNCTION WITH SYNCHRONIZED CLOCK MODULES



APPEAL BRIEF TRANSMITTAL FORM

MS APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

September 2, 2003

Sir:

Transmitted herewith is an Appeal Brief (in triplicate) on behalf of the Appellants in connection with the above-identified application.

☐ The enclosed document is being transmitted via the Certificate of Mailing provisions of 37 C.F.R. § 1.8.

A Notice of Appeal was filed on April 2, 2003.

☐ Applicant claims small entity status in accordance with 37 C.F.R. § 1.27

The fee has been calculated as shown below:

☒ Extension of time fee pursuant to 37 C.F.R. §§ 1.17 and 1.136(a) - $930.00

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02 FC:1253 930.00 OP

☒ Fee for filing an Appeal Brief - $320.00 (large entity).

☒ A check in the amount of 1250.00 is attached.

☐ Please charge Deposit Account No. 02-2448 in the amount of $0.00. A triplicate copy of this sheet is attached.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachments

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MS APPEAL BRIEF - PATENTS
PATENT
2565-0171P

IN THE U.S. PATENT AND TRADEMARK OFFICE

In re application of		Before the Board of Appeals	
Takashi Sakakura		Appeal No.:	01
Appl. No.:	09/284,736	Group:	2819
Filed:	April 19, 1999	Examiner:	Stephan F. Willett
Conf.:	2727		

For: A METHOD AND SYSTEM FOR UPDATING A DATA SYSTEM IN CONJUNCTION WITH SYNCHRONIZED CLOCK MODULES

APPEAL BRIEF

MS APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

September 2, 2003

Sir:

This is Appellant's Brief in the Appeal of the Examiner's final rejection dated January 2, 2003 in the above-identified application.

A Notice of Appeal was timely filed on April 2, 2003. A three (3) month extension of time is respectfully requested for the filing of this Brief, and the present Brief is accordingly due on September 2, 2003. The requisite fee is attached to this Brief.

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I. REAL PARTY IN INTEREST

The real party in interest in the present Appeal is the assignee of the present application, namely Mistubishi Denki Kabushiki Kaisha of Japan.

II. RELATED APPEALS AND INTERFERENCES

Appellants respectfully submit that no other Appeals or Interferences are known to Appellants, Appellants' legal representative, or the Assignee of the present application, which would directly affect or be directly affected by or having a bearing on the Board's decision in the pending Appeal.

III. STATUS OF THE CLAIMS

Claims 1-22 are pending in the subject application, with claims 1, 21, and 22 being independent. Claim 22 has been indicated as being allowed on page 2 of the Advisory Action dated February 21, 2003.

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IV. STATUS OF AMENDMENTS

Appellant presented an Amendment on August 27, 2002, correcting a minor typographical error, e.g., amending the word "issuance" to "issuing," which is reflected in the claims appended hereto. In a reply after final under 37 C.F.R. § 1.116 dated December 13, 2002, claim 13 was amended to correct a minor typographical error and claim 22 (which was indicated as being allowable in an Office Action date June 4, 2002)

was amended to include the subject matter of its base claim, namely independent claim 21. The Examiner entered the December 13, 2002, amendment as indicated in the Advisory Action dated December 26, 2002.

V. SUMMARY OF THE INVENTION

The present invention provides a method and technique for maintaining data consistency in a data updating system for computer systems, where a plurality of user terminals are connected via various types of communication environments to a central computer.

A problem with maintaining consistency of shared data occurs at various levels. One example is when two or more user terminals are updating shared data. Another example occurs when a user terminal is disconnected during an update operation such that the transaction is interrupted and becomes invalid.

Furthermore, in a multiple communication environment, e.g., wireless, local area networks, etc., the communication rates are inconsistent between the various user terminals and a connection status cannot be guaranteed. As such, transactions may become invalid and the user of the terminal incurs a loss. Such problems are prevalent in, for example, a commodities exchange system.

Accordingly, a preferred embodiment of the present invention is directed to a data updating system and method that can execute data updating transactions among different users equally, in particular, when a user terminal cannot guarantee the connection status, see page 5, line 24 to page 6, line 1.

Fig. 1 illustrates a block diagram of a data updating system, for example a

commodities exchange system, in which participation to the exchange system is only possible from user terminals, see page 16, lines 20-25. These user terminals can be wireless terminals 101, 102, intranet terminals 103, 104, or LAN terminals 105, 106 that are directly connected with a shared data server 107, whereby the wireless terminals and the intranet terminals 101-104 communicate with the shared data server 107 via a public network 108, see page 17, lines 5-15.

Depicted in Fig. 2, each of these user terminals 101-106 is provided with a user clock module 201 and a terminal communication program 202 for transmitting and receiving data between the user terminals and the server 110, see page 17, lines 21-25. The user clock module 201 is further shown in Fig. 3 and described on page 19, lines 4-16.

The shared data server 110 has a server clock module 402 as shown in Figs. 2 and 4. The server clock module 402 provides a standardized time such that the user clock modules 201 adjust their respective clocks according to the server clock module 402 such that the time is synchronized between the user terminals 101-106 and the server 110, see page 17, line 21, to page 18, line 5. Furthermore, the user clock modules 201 become valid when they are authenticated by a system controller and when their times are adjusted to the standardized time of the server clock module 402, see page 18, lines 14-18, see also page 19, lines 18-19.

When a user inputs a buy or sell order, which includes, for example, the product identification, quantity, limits, etc., as shown in Figs. 6a-b, the terminal communication program 202 in the user terminals 101-106 then processes the buy or sell order (which is an example of a shared data update request) such that it can be sent to the server

110, see page 22, lines 17-21, see also page 24, lines 3-4.

The Fig. 7 flowchart illustrates the sending procedures by the terminal communication program 202 in the user terminal 101 and describes the process of sending the shared data update request to the server 110 from the user terminals 101-106. First, a server address, such as an internet protocol address, is obtained and the shared data update request is organized into a format that can be accepted by the server 110, see page 24, lines 19-22. The clock module 201 in the user terminal 101 then attaches a data update issuing time. The data update issuing time is representative of the synchronized time at which the user concludes his input to the shared data update request, see page 25, lines 3-11. The server 110 receives the shared data update request from the user terminal 101 and sorts the shared data update request based on the attached data update issuing time, which was attached by the user terminal.

As noted above, because communication rates are inconsistent between the user terminals, e.g., the server 110 may receive data faster from the LAN terminals 105-106 than from the wireless terminals 101-102. Because the connection status cannot be guaranteed because of various problems beyond the control of the user, the user terminals 101-106 retransmit the shared data update request to the server 110 until the shared data update request is received by the server 110. Significantly, during these retransmission(s), the data update issuing time is not altered.

In other words, the shared data update request is retransmitted with the initial data update issuing time and not the retransmission time, see page 26, line 13 to page 27, line 5. Furthermore, the user terminal repeatedly retransmits the shared data update

request until the user terminal receives a receipt message from the server 110, see page 27, lines 15-21.

This procedure ensures, regardless of communication type (wireless, intranet, LAN, etc.) and regardless of interruptions in the connection state, that the users are guaranteed that their respective shared data update requests (buy/sell orders) are executed equally among different users based on their transaction time such that the user is not penalized for conducting transactions based on one communication medium over the other, see page 46, line 25, to page 47, line 5.

VI. ISSUES

Whether claims 1 and 21, the sole independent claims on appeal, are patentable over *Reuss et al.* (US 5,579,318) in view of *Yazaki et al.* (US 6,055,545).

VII. GROUPING OF CLAIMS

Each of independent claims 1 and 21 are grouped separately and do not stand or fall together. Dependent claims 2-20 are grouped with base claim 1 and stand or fall together with claim 1.

VIII. ARGUMENT

Although independent claims 1 and 21 do not stand or fall together, the below discussion pertains to both claims 1 and 21, in that each of the above discussed features are present in both claims, and therefore the above discussion has not been

duplicated for each claim. Furthermore, both claims 1 and 21 have been rejected under *Reuss* et al. and *Yazaki* et al., without the inclusion of additional references.

To establish a prima facie case of obviousness, three basic criteria must be met: (1) there must be some suggestion of motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference must teach or suggest all the claim limitations. [1]

Appellant repeatedly asserted, as evidenced in the Amendments submitted on December 13, 2002, August 27, 2002, and February 3, 2003, and as stated during the personal interview, which was conducted on January 10, 2003, with the Examiner, that the cited prior art (either alone or in combination): (1) fails to teach or suggest all the claim limitations and therefore an obviousness rejection cannot be substantiated; (2) expressly teaches away from the claimed invention; and (3) does not contain any motivation to combine the cited references.

A. The cited art does not retransmit the data until the server receives the data

As alluded to above, Appellant repeatedly asserted that the cited prior art fails to teach or suggest that the user terminal repeatedly transmits a shared data update request until the request is received by the server, as recited in either independent claims 1 and 21.

In rejecting independent claims 1 and 21, the Examiner alleges that the claims are obvious over *Reuss et al.* in view of *Yazaki et al.*

Reuss et al. discloses a process and apparatus for maintaining data concurrence between databases and telecommunication networks. In other words, *Reuss et al.* teaches that separate databases on a network maintain the same data, such that in the event that there is a problem with one database, a second database contains the same data as the database with the problem.

Yazaki et al. discloses an updating and reference management system and a reference timing control system for a shared memory. *Yazaki et al.* teaches that when different processes access a shared memory at an identical time point, the reference requests by the processes for access to the shared memory, are held in an area management unit in each time interval between control signals, the control signals being generated by the timing unit. The update reference requests are then executed at the time of each control signal, see col. 6, lines 19-43. In other words, the timing unit in *Yazaki et al.* only generates a signal for the area management unit in order to execute an updating request.

Regarding the claimed feature that the user terminal repeatedly transmits a shared data update request until the request is received by the server, Appellant specifically pointed out to the Examiner, with reference to Fig. 10 of *Reuss* et al., that it can be easily seen that if SCP1 is not available, the system attempts to route to a different server and does not repeatedly transmit a request until the request is received by the server, e.g., by SCP1.

The Examiner, however, responds in the Office Action dated February 21, 2003, that because an update request is submitted at least once again, that this reads on the claims. Appellant's representative clearly noted to the Examiner during the personal

[1] see *In re Vaeck*, 947 F.2d 48, 20 USPQ2d 1438 (Fed.Cir.1991).

interview that was conducted on January 10, 2003, that *Reuss* et al. does not route data until the request is received by the server. Appellant additionally cited col. 11, lines 36-38, to the Examiner, which teaches that "[i]f two attempts to send the Update Message to the ***other*** SCP fail, the service is denied and the call ended," emphasis added. In other words, *Reuss* et al. contains absolutely no teaching that the update message is repeatedly sent to SCP1 until SCP1 receives the update message.

The Examiner merely concludes in response thereto that because *Reuss* et al. teaches updating "at a later time," in col. 7, lines 32-37, that this can not be read in a vacuum or to mutually exclude the teaching that the update is rescheduled again, and again.

Although Appellant recognizes that Examiners give claims their broadest reasonable interpretation in light of the supporting disclosure during prosecution (as specified, for example, in MPEP §2106), this guideline for examination does not permit disregarding words/limitations in the claims. In other words, "all words in a claim must be considered in judging the patentability of that claim against the prior art." [2]

Therefore, the Examiner once again failed to meet his burden in order to substantiate an obviousness rejection because *Reuss* et al. does not teach all of the claim limitations, e.g., that the user terminal repeatedly transmits a shared data update request until the request is received by the server.

B. The cited art does not provide time synchronization

Appellant also repeatedly asserted that the cited prior art fails to teach or suggest at least a clock module for keeping a time synchronized between the user terminal and

[2] see MPEP §2143.03, citing *In re Wilson*, 424 F.2d 1382, 1385, 165, USPQ 494, 496 (CCPA 1970).

the server, whereby each of the user terminals and the server have clock modules

The Examiner alleges that *Reuss* et al. teaches "a time synchronized clock as inherent data in a header," and cites col. 8, lines 11-12, of *Reuss* et al. for support thereof. Appellant repeatedly noted to the Examiner that *Reuss* et al. merely teaches at col. 8, lines 11-12 that a message contains a header and a body, whereby the header includes elements needed to route the message to the destination, and the body contains synchronization data. This synchronization data is subscriber changeable data, which is maintained concurrently in different applications, see col. 5, lines 33-36. This synchronized data, however, is not time synchronized.

The Examiner then further alleges in an Office Action dated October 2, 2002, that *Reuss* et al. teaches a time synchronized clock "more explicitly" in col. 8, lines 64-67. *Reuss* et al. teaches in col. 8, lines 64-67 that a time stamp field may be employed to determine currency of data. In other words, the time stamp field corresponds to the origination time of a message, see col. 8, line 67. This time stamp field, however, is not time synchronized between a user terminal and a server. *Reuss* et al. continues in col. 9, lines 1-8 that if a system does not employ a time stamp, data may be included that implies precedence or sequence data based on incrementation.

Throughout prosecution, Appellant maintained that *Reuss* et al. does not even suggest that the time is synchronized between a user terminal and a server. In fact, Appellant repeatedly asserted that *Reuss* et al. expressly teaches away from this feature and directed the Examiner's attention to col. 4, lines 42-45 of *Reuss* et al., wherein it states that "[i]t is an additional object of the present invention to eliminate the necessity of ensuring that network elements are time-synchronized with each other in

order for their databases properly to me maintained concurrent." Appellant specifically noted to the Examiner that MPEP §2145(X)(D)(1) states that "[a] prior art reference that 'teaches away' from the claimed invention is a significant factor to be considered in determining obviousness."

The Examiner, however, merely concludes that:

> Reuss's disclosure of time stamps at col. 4, lines 42-45 does not mean the references should be read in a vacuum, and must be taken in context of what was reasonable based on the subject matter as a whole as would have been understood at the time the invention was made to a person having ordinary skill in the art...[and that] Reuss's suggestions are not mutually exclusive and do not obfuscate the historical teachings that data updates depend on their time stamps and computers' clocks.[3]

Appellant noted to the Examiner that these conclusionary statements were not a proper basis to substantiate an obviousness rejection because recent Federal Circuit case law precedent[4] makes it explicitly clear that the factual question of motivation is material to patentability and cannot be resolved on subjective belief and unknown authority, but must be read on the objective evidence of the record.[5] Additionally, Federal Circuit case law requires that "common sense and common knowledge" alone is improper evidence in support of an obviousness rejection.[6]

Appellant recognizes that the broadest reasonable interpretation of a claim must be consistent with the interpretation that those skilled in the art would reach.[7] Furthermore, in determining the scope and content of the prior art, references must be

[3] see pages 4-5 of the Office Action dated October 22, 2002.
[4] see *In re Lee*, 61 USPQ2d 1430 (CAFC 2002).
[5] for a complete discussion, refer to pages 16-18 of the response dated December 13, 2002.
[6] see *In re Lee* at 1434.
[7] see MPEP §2111, citing *In re Cortright*, 165 F.3d 1353, 1359, 489 USPQ2d 1464, 1468 (Fed. Cir. 1999).

read in their entirety, i.e., "as a whole."[8]

The Examiner's responses to Appellant's arguments, however, border on piecemeal examination. Referring to MPEP §707(g), it states that "[a rejection] should be stated with the full development of reasons rather than by a mere conclusion coupled with some stereotyped expression." The Examiner, however, failed to discharge his burden.

Therefore, the Examiner failed to substantiate an obviousness rejection because *Reuss* et al. does not teach all of the claim limitations, e.g., that the plurality of user terminals and the server include clock modules for keeping a time synchronized between the user terminal and the server.

C. There is no motivation to combine the cited references

The cited references do not contain any motivation to combine. An essential evidentiary component of an obviousness rejection is a teaching or suggestion or motivation to combine the prior art references.[9] Combining prior art references without evidence of a suggestion, teaching or motivation simply takes the inventors' disclosure as a blueprint for piecing together the prior art to defeat patentability -- the essence of hindsight.[10] Evidence of a suggestion, teaching or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or in some cases, from the nature of the problem solved.[11] However, a rejection cannot be predicated on the mere identification of individual components of the claimed

[8] see *Panduit Corp. v. Dennison Mfg. Co.*, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987). See also Lance Leonard Barry, *Teaching A Way is Not Teaching Away*, 79 J. Pat. & Trademark Off. Soc'y 867, 869 (1997),

[9] see *C.R. Bard, Inc. v. M3 Systems, Inc.*, 48 USPQ2d 1225 (Fed. Cir. 1998).

[10] see *Interconnect Planning Corp. v. Feil*, 227 USPQ 543 (Fed. Cir. 1985).

[11] see *In re Dembiczak*, 50 SPQ2d 1614 (Fed. Cir. 1999).

limitations.[12] Rather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention would have selected these components for combination in the manner claimed.[13]

Appellant respectfully submits that the Examiner has used nothing more than hindsight in order to combine *Yazaki* et al. and *Reuss* et al., and has identified nothing in either publication that could be construed as a suggestion, teaching or motivation to combine the prior art references. Thus, the Examiner's reference combination is improper and should be withdrawn for the following reasons.

The Examiner incorrectly alleges on page 3 of the Office Action dated June 4, 2002, that "...the artisan would have looked to the network database arts for details of implementing updates...[i]n that art, Yazuki [sic], a related network updating management system teaches...." Appellant clearly noted to the Examiner[14] that *Yazaki* et al. contains absolutely no teachings regarding a network, much less a user terminal, server, clock modules or time synchronization between a user terminal and server, and therefore there is absolutely no motivation to combine *Yazaki* et al. with *Reuss* et al., as alleged by the Examiner, because *Yazaki* et al. is nonanalogous art.

"In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned."[15] Furthermore, MPEP 2141.01(a) states that PTO classification is some evidence of "nonanalogy" or "analogy". See, for example, *Wang Laboratories, Inc. v. Toshiba Corp.*,

[12] see *In re Kotzab*, 55 USPQ2d 1313 (Fed. Cir. 2000).
[13] Id.
[14] see page 5 of the response dated February 3, 2003.
[15] see *In re Oetiker*, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992).

993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993) (Patent claims were directed to single in-line memory modules (SIMMs) for installation on a printed circuit motherboard for use in personal computers. Reference to a SIMM for an industrial controller was not necessarily in the same field of endeavor as the claimed subject matter merely because it related to memories. Reference was found to be in a different field of endeavor because it involved memory circuits in which modules of varying sizes may be added or replaced, whereas the claimed invention involved compact modular memories).

Reuss et al. has a U.S. and International classification of 370/94.2 and H04J/ 3/24, respectively. *Yazaki* et al. has U.S. and International classification of 707/200 and G06F 13/00, respectively. Therefore, because *Yazaki* et al. is not in the field of appellant's endeavor nor is it reasonably pertinent to the particular problem with which the inventor was concerned, one skilled in the art would not look towards *Yazaki* et al. to make up for the deficiencies of *Reuss* et al., which as acknowledged by the Examiner, is to teach the feature of "deciding an updating order of the shared data update request based on an attached data update issuing time of the shared data update request received from the user terminal," as recited in claims 1 and 21.

As such, because there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings, the Examiner has again failed to discharge his burden in establishing a *prima facie* case of obviousness.

IX. CONCLUSION

For at least the reasons advanced hereinabove, it is submitted that the rejections

of all claims pending in this application should be reversed.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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APPENDIX- CLAIMS APPEALED

1. A data updating system, comprising:

a plurality of user terminals; and

a server for controlling a shared data among users;

wherein the plurality of user terminals and the server include clock modules for keeping a time synchronized between the user terminal and the server;

wherein the user terminal includes an update request transmission processing unit for transmitting a shared data update request to the server by attaching a time obtained from the clock module as a data update issuing time when representing a shared data updating, and for repeatedly transmitting the shared data update request in keeping the data update issuing time unchanged until the shared data update request is received by the server; and

wherein the server includes a shared data control module for deciding an updating order of the shared data update request based on an attached data update issuing time of the shared data update request received from the user terminal.

21. A data updating method for a computer systems having a plurality of user terminals, and a server for controlling the shared data among the users, wherein the plurality of user terminals and the server respectively have clock modules for keeping a time, the data updating method comprising the steps of:

synchronizing a time between the clock modules of a plurality of user terminals and the clock module of the server;

by the user terminal, attaching a time obtained from the clock module as a data

update request issuance time to a shared data update request when requesting a shared data update, and transmitting the shared data update request to the server, and repeatedly transmitting the shared data update request in keeping the data update request issuance time unchanged until the shared data update request is received at the server; and

by the server, receiving the shared data update request from the user terminal and deciding the updating order of the shared data based on an attached data update request issuance time attached to the shared data update request received.